What is claimed are:

1. A method of manufacturing non-volatile memory device, comprising the steps of:

forming a floating gate on a semiconductor substrate;

implementing nitrification treatment for the top surface of the floating gate;

forming a silicon nitride film on the floating gate experienced by the nitrification treatment;

forming a metallic oxide film on the silicon nitride film;

implementing annealing in order to supplement oxygen for the metallic oxide film; and

forming a control gate on the metallic oxide film.

2. The method as claimed in claim 1, further comprising the step of forming a native oxide film on the floating gate experienced by the nitrification treatment before the step of forming the silicon nitride film after the step of implementing the nitrification treatment.

3. The method as claimed in claim 1, wherein the nitrification treatment is implemented using a NH_3 gas in the furnace.

4. The method as claimed in claim 3, wherein the nitrification treatment is implemented at a temperature of 600～850℃ and a pressure of 10～100torr for 30～120 minutes.

5. The method as claimed in claim 1, wherein the silicon nitride film is formed using a NH_3 gas and a SiH_2Cl_2 gas, or the NH_3 gas and a SiH_4 as a source gas by means of a low pressure-chemical vapor deposition (LP-CVD) method.

6. The method as claimed in claim 5, wherein the silicon nitride film is formed in thickness of about 3～150Å at a temperature of 600～800℃ and a pressure of 0.05～0.5torr.

7. The method as claimed in claim 1, wherein the metallic oxide film is a Ta_2O_5 film, a TiO_2 film, a Ta_3N_4 film or a TaON film.

8. The method as claimed in claim 7, wherein the metallic oxide film is formed in thickness of about 20～150Å using a metal precursor as a source gas and oxygen (O_2) as a reaction gas.

9. The method as claimed in claim 1, wherein the annealing is implemented under an oxygen (O_2) atmosphere or a N_2O atmosphere at a temperature of about 700～900℃ by means of a rapid thermal process(RTP) or furnace annealing.